

REMARKS

Claims 18-35 and 37-44 are pending in the above-identified application. Claim 36 has been canceled without disclaimer of the subject matter therein. Claims 39-44 are new and no new subject matter has been added. Claims 18, 34, 38 and 44 are the independent claims.

The drawings have been objected to. Claims 18, 22-24, 34-35 and 38 stand rejected under 35 U.S.C. 102(b). Claims 19-21, 25-28 and 29-33 stand rejected under 35 U.S.C. 103(a). Based on the following remarks and the above amendments, the Applicants respectfully request that the Examiner reconsider the outstanding objection and rejections, and that they be withdrawn.

The Drawings

The drawings stand objected to. More specifically, Figures 1, 3(a) and 4(a) stand objected to for various typographical errors or inconsistencies with the specification.

Applicants note that a Letter to Official Draftsperson including three sheets of formal drawings were submitted with the filing of the application on August 21, 2003. The three sheets of formal drawings include Figures 1, 2, 3(a), 3(b), 4(a) and 4(b), and preemptively address the issues raised by the Examiner. A copy of that filing is included herewith.

Applicants request that the Letter to Official Draftsperson including three sheets of formal drawings are entered and that the outstanding objection of the drawings is withdrawn.

The Claims are Patentable over Lauro

Claims 18, 22-24, 34-35 and 38 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,604,486 to Lauro et al. This rejection is respectfully traversed for the reasons below.

Lauro is directed to an RF tagging system in which the presence of resonant circuits on a tag is detected. Each RF tag includes multiple resonant circuits. For example, a RF tag 10 includes multiple resonant circuits including a group of decoder RF resonant circuits 12 and a group of data RF resonant circuits 14 (col. 5, lines 53-60). RF tag reader 80 includes a dithered transmitter 86 for each resonant circuit that may reside on an RF tag (col. 8, lines 47-51).

Similarly, RF tag reader 80 includes a dithered receiver 88 for each dithered transmitter 86 and receives RF energy in the frequency range of the RF energy transmitted by the corresponding transmitter 86 (col. 8, lines 61-67).

Lauro, however, fails to disclose or suggest the recitations of independent claim 18 and its dependent claims. More specifically, independent claim 18 recites a first radio frequency module having a transmitter and a receiver “being operable over the first frequency band” and a second radio frequency module having a transmitter and a receiver “being operable over the second frequency” where each frequency in the first frequency band is outside the second frequency band and each frequency in the second frequency band is outside the first frequency band. Lauro merely discloses an RF tag reader for a single tag – the transmitter 86 / receiver 88 pairs read an associated resonant circuit from the same tag all within the same frequency band. In fact, each of the multiple transmitters in the Lauro RF tag reader sweeps the same frequency range in which the tag circuits operate (col. 8, lines 51-55). Thus, independent claim 18 and its dependent claims are allowable over Lauro.

Similarly, independent claim 38 recites sending a signal having a carrier frequency within a first frequency band and a signal having a carrier frequency within a second frequency band “mutually exclusive” from the first frequency band; receiving, from a first tag operative only within the first frequency band, a return signal within the first frequency band and outside the second frequency band; and receiving, from a second tag operative only within the second frequency band and outside the first frequency band. Unlike independent claim 38, however, the signals transmitted by the tag reader of Lauro all share the same range of frequencies. Lauro also fails to disclose receiving return signals from a first tag and a second tag operating in mutually exclusive frequency bands. In sum, Lauro merely discloses sending and receiving signals within a single frequency band. Thus, independent claim 18 and its dependent claims are allowable over Lauro.

Independent claim 34 has been amended to include the recitations of dependent claim 36, which has been indicated as containing allowable subject matter. Consequently, independent claim 34 and its dependent claims are allowable.

The Claims are Patentable Over Lauro in view of Marsh

Claims 19 and 29-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lauro in view of U.S. Patent No. 5,519,381 to Marsh et al. This rejection is respectfully traversed for the reason that claims 19 and 29-33 depend from independent claim 18, and therefore are allowable for at least the reasons that independent claim 18 is allowable as discussed above.

The Claims are Patentable Over Lauro in view of Marsh and Nysen

Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lauro in view of Marsh and in further view of U.S. Patent No. 6,107,910 to Nysen. This rejection is respectfully traversed for the reason that claim 20 depends from independent claim 18, and therefore is allowable for at least the reasons that independent claim 18 is allowable as discussed above.

The Claims are Patentable Over Lauro in view of Marsh, Nysen and Steeves

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lauro in view of Marsh, Nysen and in further view of U.S. Patent 6,034,603 to Steeves. This rejection is respectfully traversed for the reason that claim 21 depends from independent claim 18, and therefore is allowable for at least the reasons that independent claim 18 is allowable as discussed above.

The Claims are Patentable Over Lauro in view of Lanzl

Claims 25-28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lauro in view of U.S. Patent No. 6,353,406 to Lanzl. This rejection is respectfully traversed for the reason that claims 25-28 depend from independent claim 18, and therefore are allowable for at least the reasons that independent claim 18 is allowable as discussed above.

New claims 39-44

New claims 39-43 depend from independent claim 38 and, therefore, are patentability for the reasons discussed above in connection with independent claim 38.

New claim 44 is an independent claim. As discussed above, Lauro fails to disclose a first RF module and a second RF module where each is associated with a mutually exclusive frequency band. In addition, Lauro also fails to disclose a first RF module and a second RF module each configured to receive a return signal within the frequency band for that RF module.

New claim 44 is also patentable over Lauro in view of Lanzl. In particular, Lanzl merely discloses operation within a single frequency band (e.g., tags with a time delay described in col. 7, lines 7-34), or transmission in one frequency band and reception in another frequency band (e.g., Figure 1 showing tag reception at 2.44 GHz and tag transmission at 5.78 GHz). Unlike claim 44, however, Lanzl fails to disclose recitations of claim 44.

In fact, the characterization of Lanzl in the prior Office Action goes to far. For example, many of the references in the prior Office Action actually relate to a Wireless Power Source (WPS), which “[u]nlike conventional RFID ‘interrogators,’ . . . is a single-purpose device, that needs only to send power to the tags” (col. 41, lines 33-35). Unlike claim 44, where the first RF module and the second RF module each include a transmitter and a receiver configured to operate at the frequency band associated with that RF module, the WPS of Lanzl merely transmits operating at 125 KHz (col. 41, lines 24-29) or at 13.56 MHz (col. 42, lines 16-22) without receiving at either of those frequencies. Similarly, the cell controller of Lanzl transmits at 2.44 GHz while receiving at a different frequency such as 5.78 GHz (see Figure 1). This is due to the fact that the tags in Lanzl translate the carrier frequency to a different frequency and then transmits a signal at that different frequency (e.g., 2.44 GHz to 5.78 GHz; col. 5, lines 11-34). In fact, Lanzl teaches away from a first RF module and a second RF module each transmitting and receiving within its respective mutually-exclusive frequency band by specifying “permissible” combinations of different frequency bands (col. 6, line 59 – col. 7, line 5). Presumably, other combinations of frequency bands are impermissible.

Thus, new independent claim 44 is patentable over Lauro in view of Lanzl.

CONCLUSION

All of the stated grounds of rejection have been properly traversed or rendered moot. The Applicants therefore respectfully request that the Examiner reconsider all presently outstanding

rejections, and that they be withdrawn. The Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

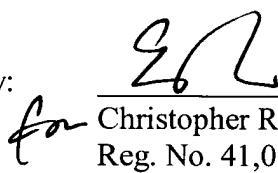
Prompt and favorable consideration of this Amendment is respectfully requested.

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Respectfully submitted,
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